

Financial literacy

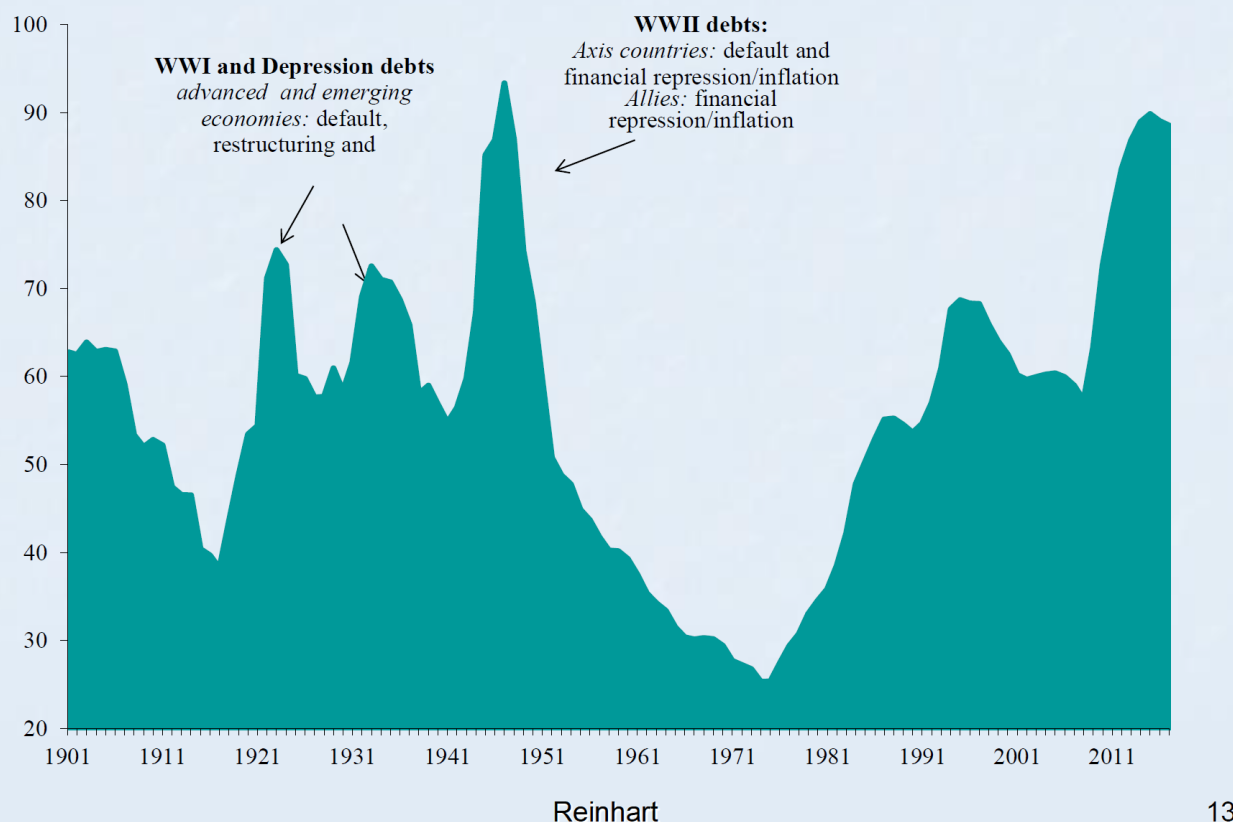
Why do we care?

Financial literacy and inclusive growth in the European Union
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Maria Demertzis

The state of debt

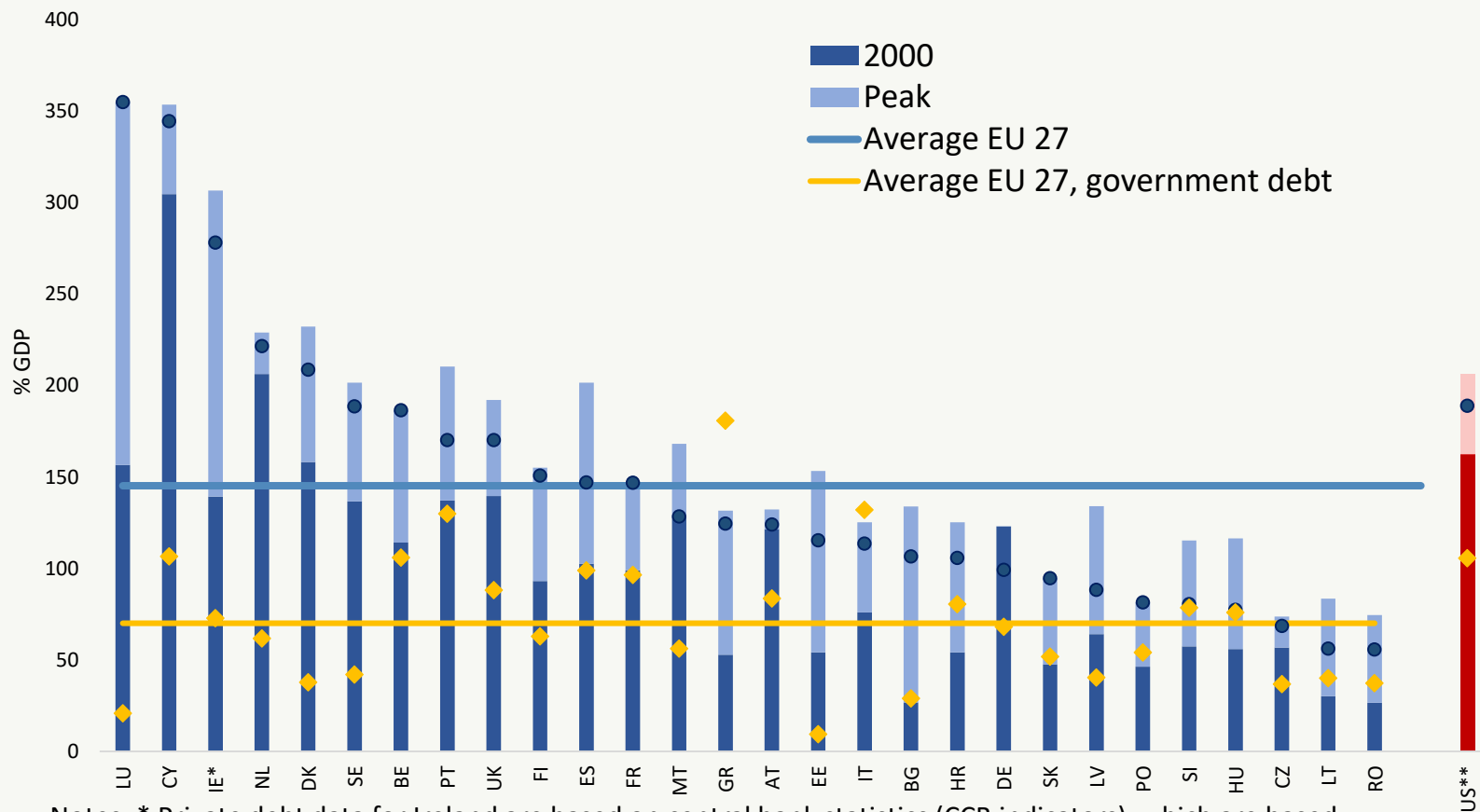
Public debt as a percent of GDP: Advanced Economies: 1900-2016



Source: Professor Carmen Reinhart, Keynote speech Bruegel Annual Conference 2016.

Debt in % of GDP

(households and non-financial corporates, government)



Notes: * Private debt data for Ireland are based on central bank statistics (CCB indicators), which are based on national bank credit data, thereby excluding debt of foreign affiliates. ** Private debt data for US are based on World Development Indicators and GG debt on Fred statistics.

Sources: Eurostat, Irish National Central Bank Statistics, World Development Indicators, Fred.

What do we know about financial literacy?

Financial literacy around the world

- 1 in 3 adults are financially literate
- EU, US and non-EU advanced countries score higher
- There are champions and laggards in each region. Almost every second person is financially literate in Uruguay, Botswana, Turkmenistan and Bhutan. While literacy rate is below 20% in Haiti, Somalia, Tajikistan and Nepal.

Country/region	Number of countries	Literacy Score
EU	28	50
Non-EU advanced (excl. US)	8	58
US	1	57
China	1	28
Asia (excl. China)	12	32
Africa	35	33
Commonwealth of Independent States (CIS)	12	30
Latin America & Caribbean	19	29

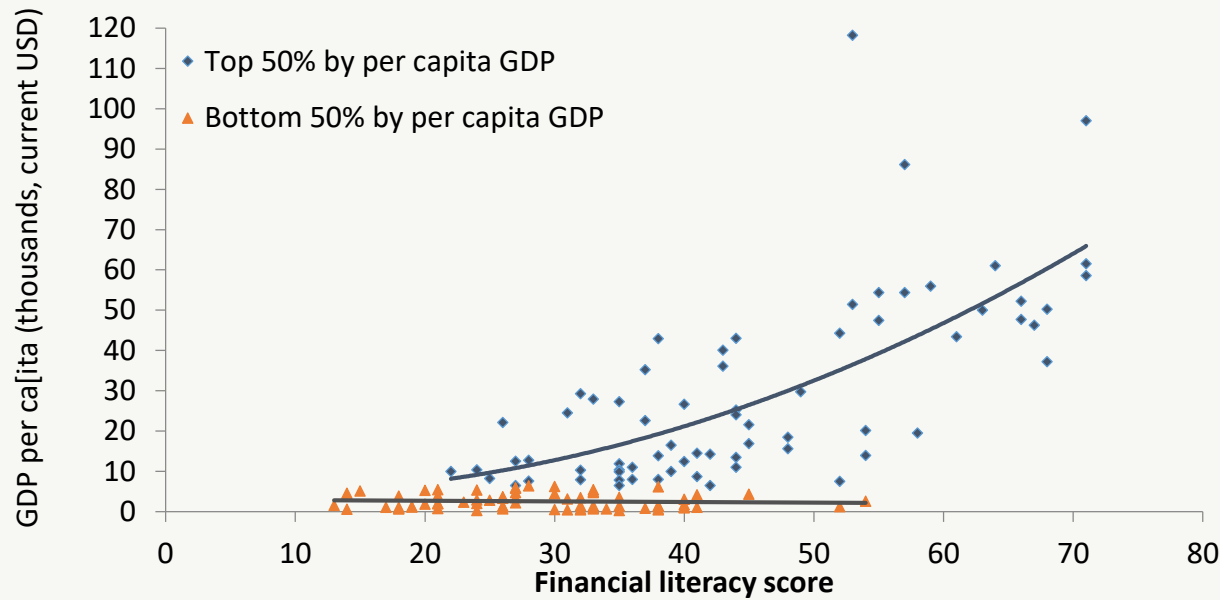
Source: Bruegel based on Global FinLit Survey of Standard and Poor's. Note: Unweighted averages are shown for country groups.

Financial literacy around the world

(What is financial literacy and how do we measure?)

Financial literacy and per capita GDP by countries, 2014

- Stronger association between financial literacy and the level of development (proxied by GDP per capita) in developed economies

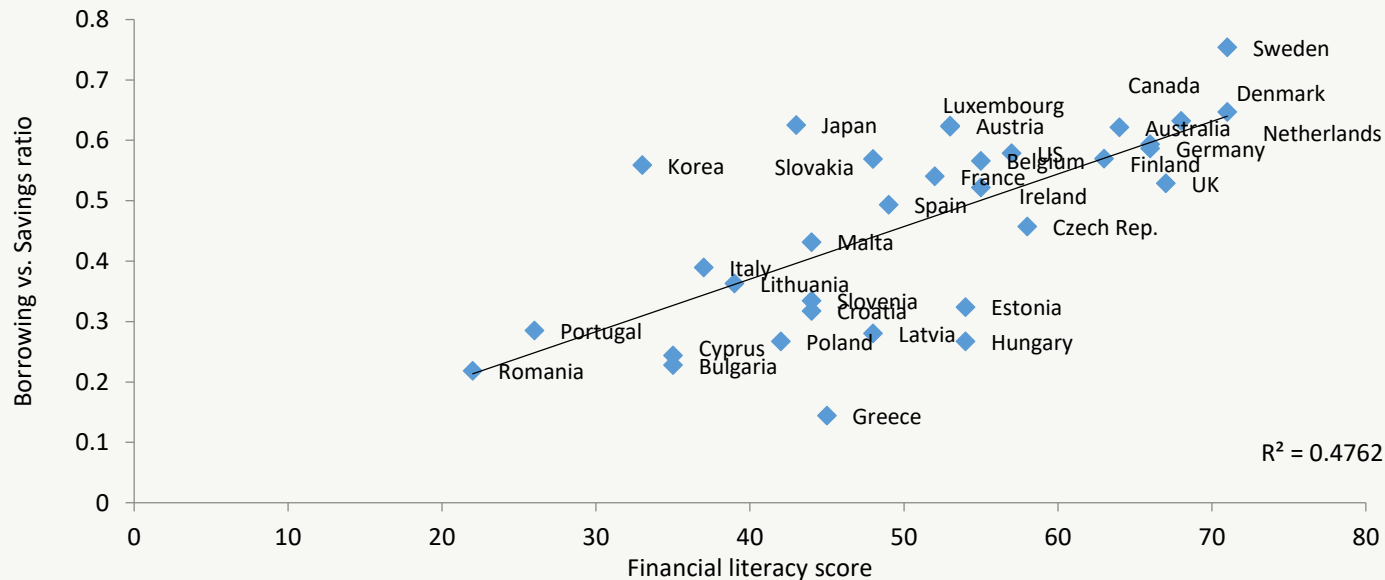


Source: World Bank World Development Indicators and Global FinLit Survey of Standard and Poor's.

What do we know about financial literacy?

- Within developed economies there is a positive association between adults' borrowing and saving behavior
- Stronger association with borrowing than saving behavior
- “Dynamism” in the interaction of individuals with financial institutions as the ratio between borrowing and saving behavior has strong positive association with FinLit

Ratio between borrowing and saving vs. financial literacy score

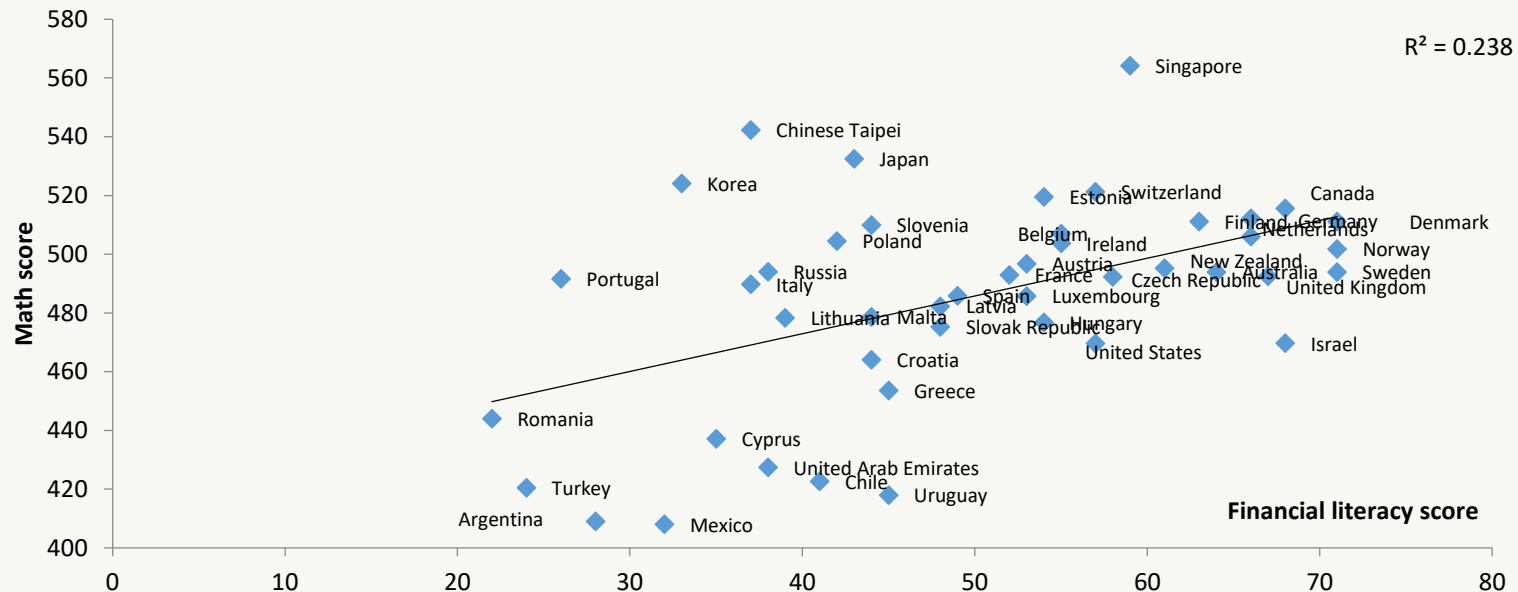


Source: Global Financial Development Database and Global FinLit Survey of Standard and Poor's. Note: Adults saving at a fin. inst. / borrowing from a fin. Inst. in the past year to total adults (%) is reported as the percentage of adults who report saving or setting aside any money using an account at a formal financial institution such as a bank, credit union, microfinance institution, or cooperative in the past 12 months. The data is from world-wide household survey, by Demirgüç-Kunt and Leora Klapper (2012) . World Bank.

What do we know about financial literacy?

Education, particularly numeracy skill is an important component of financial literacy, but it is not a perfect proxy.

Population financial literacy score vs. Students' PISA Math score

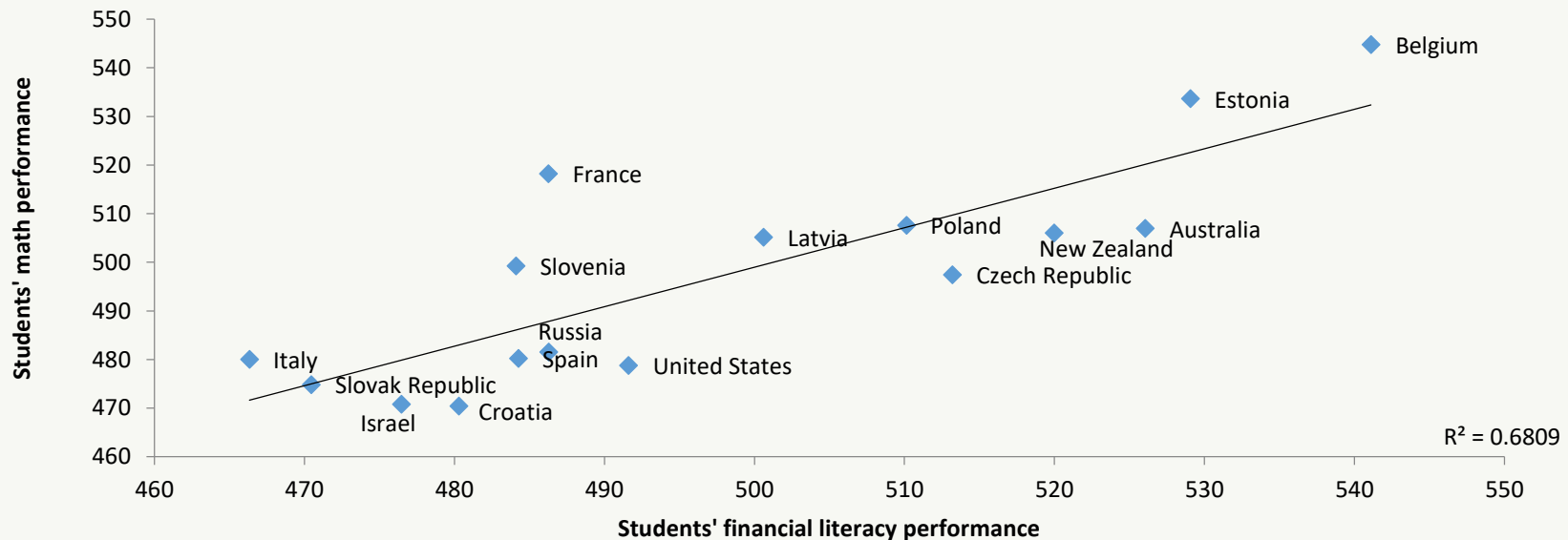


Source: OECD Pisa 2015 and Global FinLit Survey of Standard and Poor's.

What do we know about financial literacy?

Financial literacy education can be most beneficial when integrated in the general education curriculum, since the link between math performance and financial literacy seem to weaken at a later stage.

PISA special module on financial literacy and students' math scores, 2014



Source: OECD Financial Literacy Pisa 2012 and Global FinLit Survey of Standard and Poor's.

Why do we care about financial literacy?

Growing complexity and shifting risk:

1. Resilience in retirement
2. Using debt productively
3. *Literacy and Inclusive growth*

Why do we care about financial literacy?

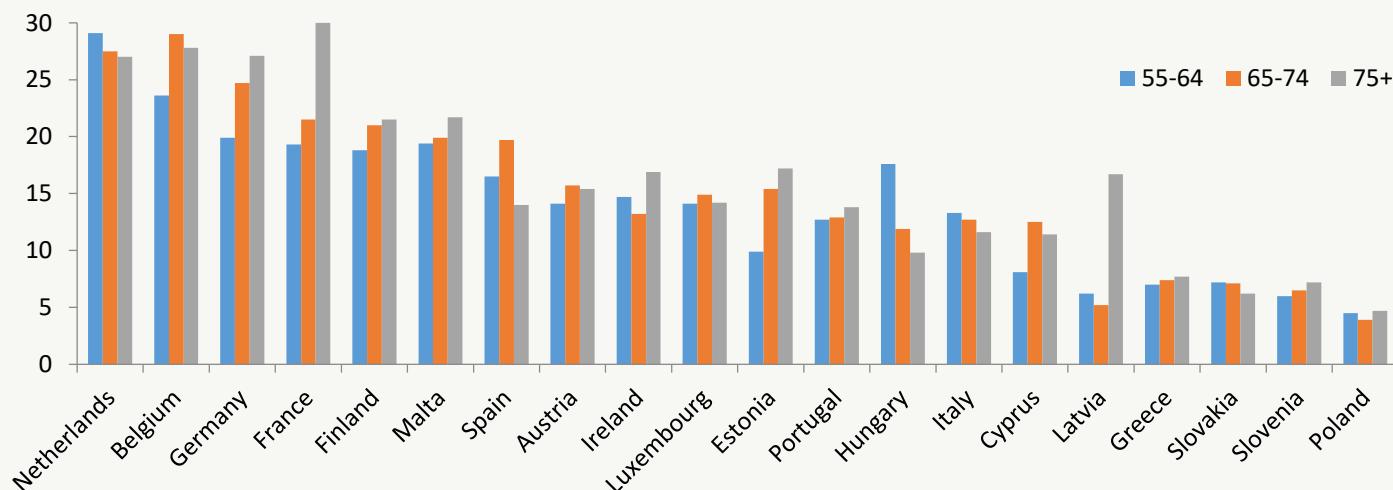
Growing complexity and shifting risk:

1. Retirement savings (from Defined Benefit to Defined Contribution)

Shifting towards more occupational and personal insurance systems could alleviate some burden on the PAYG system in the future (EC, 2015) but this will demand increased literacy from individuals on the risks and benefits

- People who respond that they think of retirement planning tend to save more and the causality runs from planning to wealth and not the other way around (Lusardi et al., 2010) - *better financial literacy boosts the intention to save*
- 30-40% of US retirement wealth inequality is accounted for by financial knowledge (Lusardi et al. 2017)
- HH scoring better on FL accumulate more wealth and more likely to invest in stocks (van Rooij, 2012)
- Diverse HH portfolio decreases the overreliance on retirement income

The share of financial assets in household's total assets, %



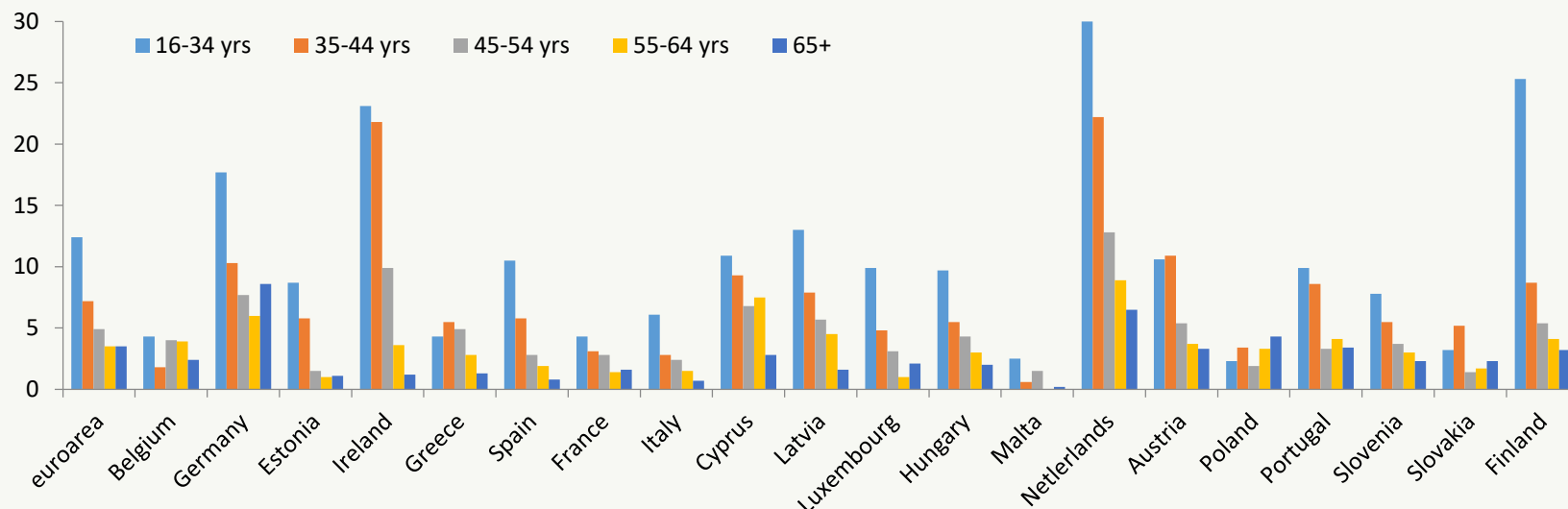
Source: ECB's Household Finance and Consumption Survey, wave 2 (2014). Financial assets include deposits, shares, bonds, mutual funds and voluntary pension/whole life insurance.

Why do we care about financial literacy?

2. Borrowing and debt (household overleveraging and fragility)

- 2 types of debt, mortgage debt (85% of EA total HH debt) and non-mortgage debt (consumption debt, credit card debt/overdraft and non-mortgage debt such as business loan etc.)
- HH debt is highest for young HHs (were hit the hardest during crisis, overreliance on housing equity)
- Low income households score lowest, but within income groups poorer HH scoring better at FL tend to negotiate and get favorable contracts, pay lower interest compared to the HH of same income (OECD, 2005)

Share of households having negative net wealth selected EU countries by age groups, 2014



Why do we care about financial literacy?

Financial literacy & Growth (caution in terms of causality)

- Financial literacy is a tool to sustain growth

Financial literacy & Inclusive growth

- Growth is sustainable when it is inclusive

3. Literacy and Inclusive growth

Consistent findings across the population:

- Hump-shaped age distribution (<25 – low, >50 – high literacy)
- Women consistently score lower than men and tend to say “don’t know” (in many cases women tend to make “day-to-day” household spending decisions). BUT there is no gender-gap among schoolchildren
- Minority groups score lower (African-Americans and Hispanics in the US, people with migrant background in the EU)
- People living in rural areas (US)
- Income, wealth and education dependent

————→ Giving people the education and the tools to better navigate the increasingly complex financial world is one of the pre-conditions to achieving inclusive growth.

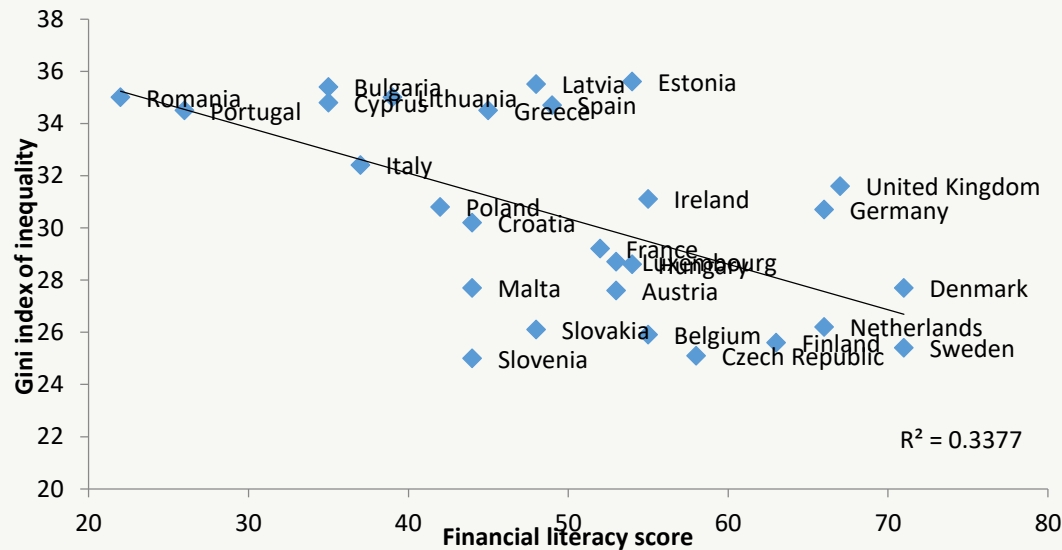
Investing in financial literacy improves the chances for those who are constrained by low opportunity, to access the benefits of economic growth.

Inclusiveness and FL

(inequality, vulnerability and social exclusion & mobility)

Financial literacy and Inequality

Countries performing better at financial literacy also tend to have lower inequality.



Source: S&P Global FinLit survey and Eurostat.

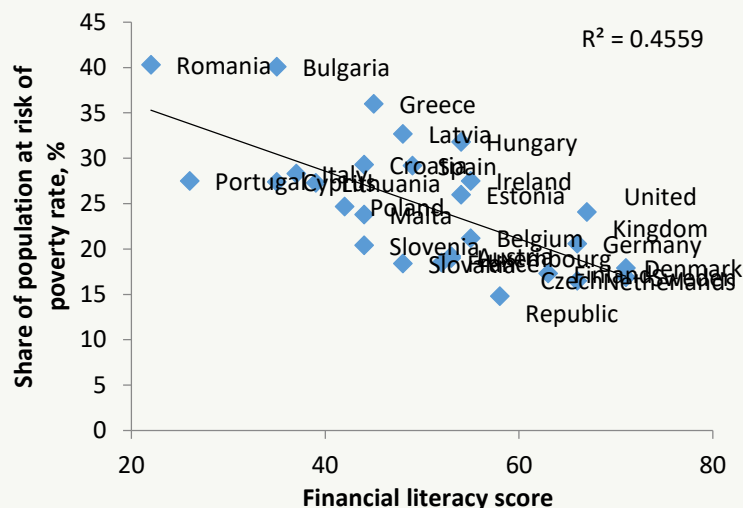
- Poorer HHs have short-term planning (overcoming crises), & “can’t afford” long-term planning for the future → hampers asset-building

Inclusiveness and FL

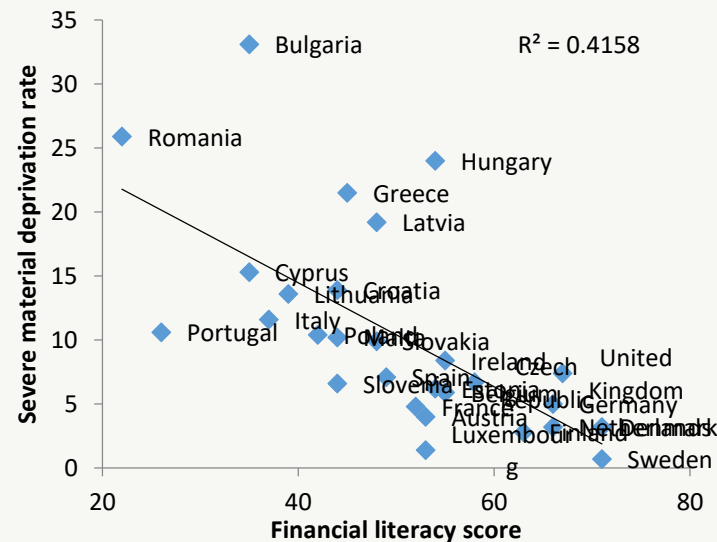
(inequality, vulnerability and social exclusion & mobility)

Financial literacy and vulnerability and social exclusion

Financial literacy and at risk of poverty rate (AROP)



Financial literacy and Severe material deprivation



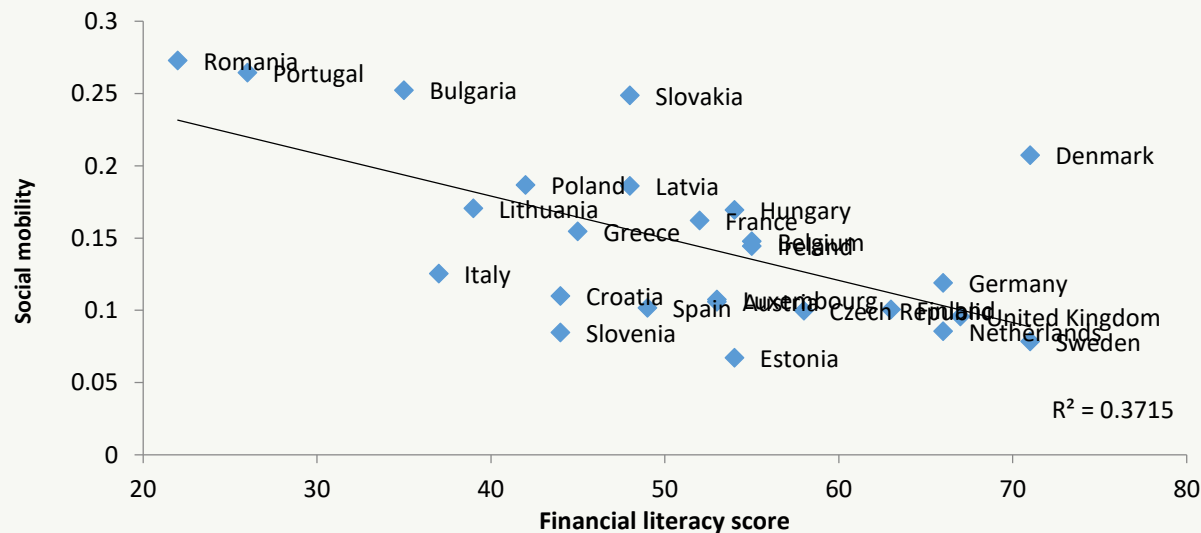
Source: S&P FinLit survey and Eurostat. Note: 'At risk of poverty': people with a disposable income below 60 percent of the national median equivalised disposable income. 'Severely materially deprived': people unable to afford at least four of the following: 1. rent, mortgage or utility bills 2. adequate home heating 3. a reserve against unexpected expenses 4. regular meat or proteins 5. a holiday 6. a television set 7. a washing machine 8. a car 9. a telephone.

Inclusiveness and FL

(inequality, vulnerability and social exclusion & mobility)

Financial literacy and social mobility

In countries with higher financial literacy scores, the relation between wealth and math scores is weaker.



Source: S&P FinLit survey and Sandefur (2015) for social mobility. Note: Social mobility is measured as the correlation between students' Math test scores and socio-economic background.

- Parents have more influence on young adults' financial behavior than work experience and high school financial education (US study, SF Fed, 2009)

Policy recommendations

1. Start early as possible. Integrate it into the school curriculum.
 - Flemish Community in Belgium (best European performer in financial literacy), financial curriculum was introduced and made mandatory in the secondary school curriculum in 2010-2011.



Policy recommendations

2. Move away from “one-size fits” all programs and design programs tailored to the needs of a specific community.
3. Financial education is a life-time learning process.
4. Provide tools to better evaluate financial literacy.
5. Increase private sector involvement.
6. More is not necessarily better.
7. Need for behavioral research

Thank you!

Financial literacy in the EU



Financial literacy and education (*Measurement Issues*)

Literacy

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graph TD; Literacy --- FE((Financial education)); Literacy --- IB((Impact on Behavior));
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Financial education

(the knowledge that can be acquired institutionally, such as basic concepts of economics, finance and numeracy skills)

Impact on Behavior

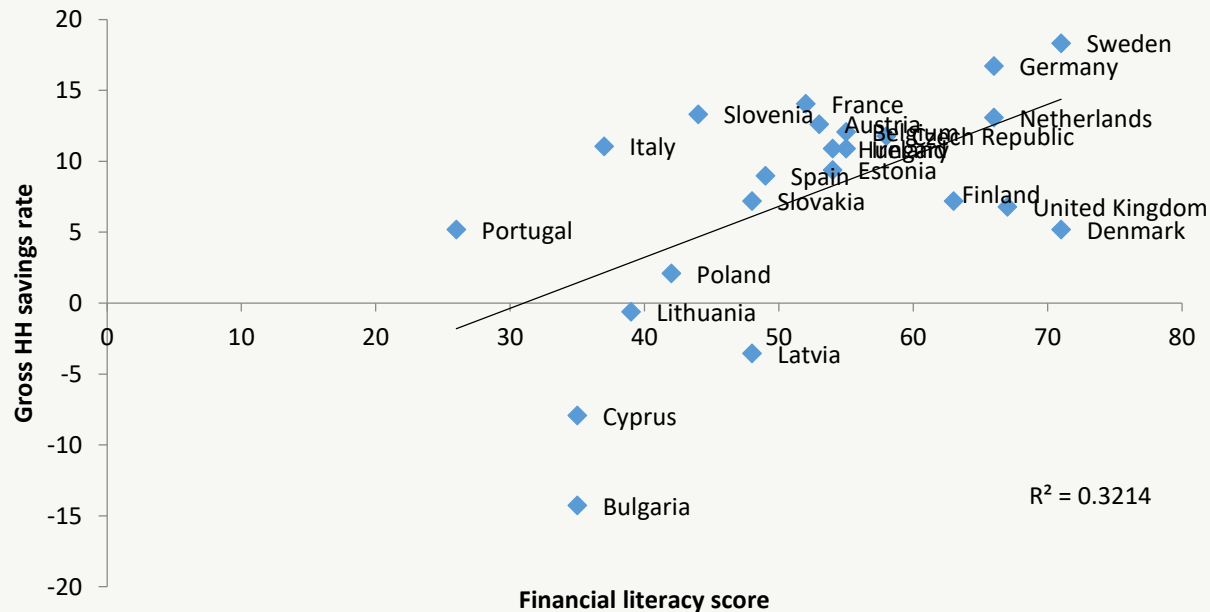
(*Ability to employ* this knowledge in making financial decisions)

Financial literacy around the world

(What is financial literacy and how do we measure?)

- Positive association between Gross HH saving rate and FinLit

Financial literacy and gross household saving rate



Source: Eurostat and Global FinLit Survey of Standard and Poor's. Note: Gross household saving rate is defined as gross saving divided by gross disposable income. Gross saving is part of the gross disposable income which is not spent on consumption.

Financial literacy around the world

(What is financial literacy and how do we measure it?)

Standard question on FinLit (part of the initial BIG3 questions) US representative survey
“Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow: more than \$102, exactly \$102, less than \$102?”

- 7 in 10 adults get it right
- Age implication (<50 – 5% lower, >50 – 5% higher)
- Education (<college- 8% lower, >= college – 8% higher)
- Gender (8 in 10 men get it correctly vs. 6 in 10 women)

Standard and Poor’s run a survey in 2014 measuring financial literacy around the world

- 4 Standard questions (compound interest, inflation, risk diversification and simple numeracy)
- Sample- 150,000 adults in 140 countries
- Those who could answer at least 3 out of 4 questions = “financially literate”

Policy recommendations

4. Provide tools to better evaluate financial literacy. It is important to understand the link between the level of financial literacy and individual's saving, spending and consumption behavior in a cross-country comparative setting in the EU. In this regard, we propose to integrate a full financial literacy questionnaire into the ECB's Household Finance and Consumption Survey (HFCS) and conduct them for all countries (so far, literacy outcomes have only been recorded for Luxembourg and Slovakia).

5. Increase private sector involvement. Private sector is at the forefront of financial education and therefore involving them is crucial. But at the same time, their involvement needs to be monitored in order to avoid conflicts of interest. Negative experience with a financial institution makes educators' task harder in accessing these individuals and delivering education (Beck and Neiser, 2009).

6. More is not necessarily better. Information and education overload can discourage individuals from making financial decisions. Too many options for retirement savings, i.e. number of fund options, discourage individuals from saving (Iyengar et al.2003). Instead, the best practice is to design programs with a few number of choices and increase it regressively depending on the individual's financial capacity and preferences.

Policy recommendations

7. Need for behavioral research. Effect of one-time educational program dissipates over time (Fernandes et al. 2013). Since financial literacy has both education and behavioral aspects, it is crucial to understand the effect of education programs on the individual's financial behavior. This requires longitudinal surveys and randomized control trials. Only a handful, involving a large enough sample and over a longer period of time, has been implemented globally, e.g. Becchetti et al. (2011) for Italy and Bruhn et al (2013) for Brazil. These research efforts will increasingly benefit from interdisciplinary approach, that is, involving behavioral economist, sociologists and psychologists in designing the survey questionnaire.

“Big Three” questions on financial literacy

Suppose you had \$100 in a savings account and the interest rate was 2% per year. After 5 years, how much do you think you would have in the account if you left the money to grow: more than \$102, exactly \$102, or less than \$102? {Do not know; refuse to answer}

Imagine that the interest rate on your savings account was 1% per year and inflation was 2% per year. After 1 year, would you be able to buy more than, exactly the same as, or less than today with the money in this account? {Do not know; refuse to answer}

Do you think that the following statement is true or false? “Buying a single company stock usually provides a safer return than a stock mutual fund.” {Do not know; refuse to answer}

Outline

1. Financial literacy around the world (*What is financial literacy and how do we measure?*)
2. Financial literacy and education (*Measurement Issues*)
3. Financial literacy in the EU
 - Why do we care about financial literacy?
 - Saving, pensions & shifting risk*
 - Borrowing and household debt*
 - Inclusive growth*
 - Inclusiveness and financial literacy
 - Inequality and FL*
 - Vulnerability, social exclusion and FL*
 - Mobility and FL*
4. Policy implications

Policy recommendations

- But simply introducing financial education is not a panacea.
- Weak relationship between the availability of financial education and literacy score
- Why does Flanders outperform?
 - highest share of teachers attending professional development in financial education
 - Belgium outperforms others in math, science and reading (esp. Flanders in math 531, compared to 511 in German speaking communities and 493 in French speaking communities)
 - 78% percent of the students respond that conditions in their schools are ideal compared to the OECD average of 61%, indicating a favorable learning environment overall

Literacy score and availability of financial education in schools in OECD and partner countries, 2012

